

## CLAIMS

1. A joint for a superconducting cable, the joint being for jointing two lengths of the superconducting cable with each other, the superconducting cable comprising a former, a superconducting conductor, and an insulating layer;

the construction of the joint comprising the steps of:

(a) preparing a jointing ferrule for jointing the formers;

(b) sliding the jointing ferrule over the end portions of the formers to be jointed;

(c) butting the end faces of the formers against each other in the jointing ferrule;

(d) compressing the jointing ferrule so as to joint the formers such that the compressed ferrule has a diameter equal to that of the former;

(e) butting the end faces of the superconducting conductors to be jointed against each other at the outside of the compressed ferrule; and

(f) jointing the superconducting conductors with each other such that the jointed superconducting conductors have a diameter equal to that of the superconducting conductor of the superconducting cable.

2. A joint for a superconducting cable as defined by claim 1, wherein the construction of the joint further comprises the step of providing a restoring insulating layer at the outside of the superconducting conductor such that the restoring insulating layer has a diameter equal to that of the insulating layer of the superconducting cable.

3. A joint for a superconducting cable as defined by claim 2, wherein:

(a) the superconducting cable further comprises a shielding layer; and

(b) the construction of the joint further comprises the steps of:

(b1) butting the end faces of the shielding layers to be jointed against

5 each other at the outside of the restoring insulating layer; and

(b2) jointing the shielding layers with each other such that the jointed shielding layers have a diameter equal to that of the shielding layer of the superconducting cable.

4. A joint for a superconducting cable as defined by any one of claims 1 to 3,

10 wherein:

(a) the superconducting cable yet further comprises a channel for a coolant that cools the superconducting conductor; and

(b) the joint comprises an outer case that can secure a cross-sectional area nearly equal to that of the coolant channel of the superconducting cable.